

Application No. 10/562,802
Amendment dated December 29, 2009
After Final Office Action of

Docket No.: 66969-0003

AMENDMENTS TO THE CLAIMS

1. (Cancelled)
2. (Currently Amended) A process for joining components for torque transmission in a vehicle, the components being made from hardenable steel and having a material thickness, by producing a weld seam without secondary heating, comprising:
 - positioning a welding electrode with respect to a weld line;
 - applying a voltage;
 - supplying a plasma gas;
 - forming an arc; and
 - melting the steel in the vicinity of the weld line over the entire material thickness, wherein the energy per unit length introduced by the welding process is in the range from 234 J/mm to 3360 J/mm, and wherein the hardenable steel has a material thickness in the range from approximately 2.0 mm to 10.0 mm.
3. – 13. (Canceled)
14. (Previously Presented) A process according to claim 2, wherein the weld seam is of single-layer design.
15. (Canceled)
16. (Previously Presented) A process according to claim 2, wherein the weld seam is a butt seam or a fillet seam.
17. (Canceled)

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18. (Previously Presented) A process according to claim 2, wherein during the welding operation, a plasma jet is moved in the welding direction at a welding speed of at least 0.2 m/min.

19. (Canceled)

20. (Previously Presented) A process according to claim 2, wherein the weld seam is produced by radial circumferential welding.

21. (Previously Presented) A join between at least two components for torque transmission made from hardenable steel, wherein the join comprises at least one weld seam produced by a process according to claim 2.

22. (Previously Presented) A join according to claim 21, wherein at least one of the components is a hollow shaft with a wall thickness in the range from approximately 2.0 mm to 10.0 mm.

23. (Previously Presented) A join according to claim 18, wherein at least one of the components is a hollow shaft with a wall thickness in the range from approximately 2.0 mm to 10.0 mm.

24. (Previously Presented) A join according to claim 21, wherein the join and adjoining subregions of the components are essentially free of cracks.

25. (Previously Presented) A join according to claim 22, wherein the join and adjoining subregions of the components are essentially free of cracks.

26. (Previously Presented) A join according to one of claim 21, comprising a ductility in the range from about 250 HV to 650 HV.

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27. (Previously Presented) A vehicle comprising an engine with a drive system, wherein the drive system includes components for torque transmission, and at least two components have been welded to one another by a process according to claim 2.
28. (Previously Presented) A vehicle comprising an engine with a drive system, wherein the drive system includes components for torque transmission, and at least two components have been welded to one another by a process according to claim 18.
29. (Previously Presented) A vehicle comprising at least two components made from hardenable steel and connected by a join comprising a weld seam produced by a process according to claim 2.
30. (Previously Presented) A vehicle comprising at least two components made from hardenable steel and connected by a join comprising a weld seam produced by a process according to claim 18.